

**RICKARD HILL FIELD PROJECT: PEERING INTO DEEP TIME**

*The interest in a science such as geology must consist  
in the ability of making dead deposits represent living scenes.*

Hugh Miller

The outcrop at Rickard Hill Road exposes two distinctly different rock units. While at the outcrop, you will observe lithologies, textures and sedimentary structures in the lower and upper units and examine the fossils and their taphonomy in each unit. These data comprise clues to the conditions that existed when these rocks were loose sediments, deposited in a sedimentary environment. You may collect as many samples as you wish for further examination in the laboratory. After you have compiled all of your data, you must try to make sense of them. You are to make interpretations of the depositional conditions represented by each unit and by the change from one unit to the other.

Your observations and interpretations will be presented in a report, which follows the general outline of a professional paper in a scientific journal. The paper should be organized as follows:

**Title****Author**

**Abstract** (See separate sheet on “What is an Abstract?”)

**Introduction** – Should include a description of the location and a general description of the two rock units, lower and upper, including color, bedding thickness and style, weathering characteristics, overall appearance, etc.

**Data (observations)** – For each unit, lower and upper, write comprehensive descriptions that include rock type, texture, fossils present, taphonomy, sedimentary structures, nature of contacts with adjacent units, and any other pertinent observations

**Interpretations** – Offer separate interpretations of each unit (lower and upper) in terms of environments of deposition and processes operating in these environments. These interpretations should be supported with reference to specific data (e.g., “Hardgrounds were present on the tops of many beds as evidenced by the patches of encrusting bryozoans that cover upper bedding planes.”) Make these interpretations as vivid and detailed as the data allow. **DO NOT** include any interpretations for which there is no data (e.g., plesiosaurs were swimming in the area)!

**Discussion** – Once you have offered your interpretations of individual units, this section should address uncertainties in your interpretations, anomalous features and a discussion of the events or history that are recorded by the change from lower to upper unit (i.e., what could have caused this change?).

**Conclusions** – Restate the most important descriptive and interpretive points from the paper

**Acknowledgements** – This is the place to thank your field and lab partners! Make sure you use their full names and spell them correctly!

**References Cited** – Use standard GSA format for any references used. Make sure that complete references are included for each source cited in the paper. Also, make sure that each reference listed in this section is actually cited in the body of the paper.

**Helpful Hint:** Use subheadings in each section to help you organize your thoughts and to help the reader follow your thoughts. For example, in your data section, use a subheading for lower unit and then use a smaller magnitude subheading for paleontological data, one for lithologic data, etc.

**All Reports are DUE on Wednesday, April 27. Late Reports Will Not Be Accepted.**